

2000  $\text{cm}^{-1}$ ) to aromatic and graphitic hydrogen atoms (1000  $\text{cm}^{-1}$ –1250  $\text{cm}^{-1}$  and 750  $\text{cm}^{-1}$ –1000  $\text{cm}^{-1}$ ) of less than 1.22, wherein said furnace black is the support material for said electrocatalyst.

## II. REMARKS

### Preliminary Remarks

Upon entry of this amendment, independent claims 1 and 6 will be at issue. Claims 1 and 6 have been amended to a furnace carbon black having a hydrogen content of greater than 4200 ppm. Support for the claim amendments can be found in the specification as filed (e.g., see page 2, line 33). Therefore, the applicants believe that no new matter has been added and respectfully request reconsideration and allowance of the present application.

Attached hereto is a marked-up version of the changes made to the application by the current amendment. The attached Appendix is captioned **“Version with markings to show changes made”**.

The applicants request entry of the foregoing amendment pursuant to 37 C.F.R. §1.116 in that should the examiner maintain the final rejection, the amendment to the claims will place the application in better form for appeal.

### Patentability Remarks

#### *Rejections under 35 U.S.C. §102(a) –*

Claim 1 was rejected under 35 U.S.C. §102(a) as allegedly being anticipated by Freund *et al.* (DE 196 21 565). The applicants respectfully disagree and traverse.

As amended, claim 1 is directed to a furnace carbon black having a hydrogen content of greater than 4200 ppm. The carbon black of Freund *et al.* has an H content of less than 4200 ppm (4189 ppm to be exact). Therefore claim 1 is not anticipated by Freund *et al.*

#### *Rejections under 35 U.S.C. §103(a) –*

Claim 1 was rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Freund *et al.* The applicants respectfully disagree and traverse.

As amended, claim 1 is directed to a furnace carbon black having a hydrogen content of greater than 4200 ppm. The carbon black of Freund *et al.* has an H content of 4189 ppm. There is no motivation for one skilled in the art to produce a carbon black of greater than

4189 ppm as claimed in claim 1 (4200 ppm). Therefore, claim 1 is not obvious over Freund *et al.*

Claim 6 stands rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Freund *et al.* in view of Rositani *et al.* (*Carbon* 25, 325 – 332, 1987). The applicants respectfully disagree and traverse.

As amended, claim 1 is directed to a furnace carbon black having a hydrogen content of greater than 4200 ppm. The carbon black of Freund *et al.* has an H content of 4189 ppm. There is no motivation for one skilled in the art to combine the carbon black of Freund *et al.* with the electrocatalyst of Rositani *et al.* In addition, even if one skilled in the art were to combine the carbon black of Freund *et al.* with the electrocatalyst of Rositani *et al.*, the product would be an electrocatalyst with a furnace carbon black of less than 4200 ppm. In other words, Freund *et al.* in view of Rositani *et al.* does not teach or suggest all the limitations of claim 6. Consequently claim 6 is not unpatentable over Freund *et al.* in view of Rositani *et al.*

The applicants respectfully submit that this application is in condition for allowance and request a timely notice to that effect. Should questions relating to patentability remain, the examiner is invited to contact the undersigned to discuss the same.

Respectfully submitted,

PILLSBURY WINTHROP LLP

By: 

Thomas A. Cawley, Jr., Ph.D.

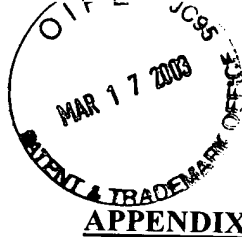
Registration No.: 40,944

Direct No.: 703-905-2144

TAC\GP

1600 Tysons Boulevard  
McLean, VA 22102

Telephone: 703-905-2000  
Facsimile: 703-905-2500



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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

1. (Twice Amended) A furnace carbon black, having a hydrogen content of greater than 4200 [4000] ppm, determined by CHN analysis, and a peak integral ratio, determined by inelastic neutron scattering, of non-conjugated hydrogen atoms ( $1250\text{ cm}^{-1}$ – $2000\text{ cm}^{-1}$ ) to aromatic and graphitic hydrogen atoms ( $1000\text{ cm}^{-1}$ – $1250\text{ cm}^{-1}$  and  $750\text{ cm}^{-1}$ – $1000\text{ cm}^{-1}$ ) of from 1.17 to 1.22.
6. (Amended) An electrocatalyst comprising a furnace carbon black, having a hydrogen content of greater than 4200 [4000] ppm, determined by CHN analysis, and a peak integral ratio, determined by inelastic neutron scattering, of non-conjugated hydrogen atoms ( $1250\text{ cm}^{-1}$ – $2000\text{ cm}^{-1}$ ) to aromatic and graphitic hydrogen atoms ( $1000\text{ cm}^{-1}$ – $1250\text{ cm}^{-1}$  and  $750\text{ cm}^{-1}$ – $1000\text{ cm}^{-1}$ ) of less than 1.22, wherein said furnace black is the support material for said electrocatalyst.